Claims

1. A data receiving system having at least one input, the data receiving system comprising:

a demodulator system for receiving packets in parallel over multiple channels; and

a tunneling destination, coupled to said demodulator system, said tunneling destination for receiving the packets from the demodulator system and for serializing the packets.

2. The data receiving system of claim 1, wherein each of the multiple channels are RF channels and each of the multiple channels are received at a single input of the means for receiving.

3. The data receiving system of claim 2, wherein each RF channel carries packets that are compliant with the DOCSIS standard.

4. The data receiving system of claim 1, further comprising

an analog to digital converter having an input adapted to receive RF input signals and having an output;

a plurality of digital filters, each of said filters having an input coupled to the output of said analog to digital converter and having an output; and

a plurality of demodulators each of said plurality of demodulators having an input coupled to the output of a respective one of said filters and having an output and the output of each demodulator being coupled to said tunneling destination.

5. The system of claim 4 further comprising a down-converter circuit which receives a first RF input signal at the input of the demodulators and provides a down-converted signal to said analog to digital converter.

6. The system of claim 5 wherein the digital signal processors simulate filters having a band pass filter characteristic.

7. The system of claim 4 wherein said demodulators are provided as QAM demodulators.

8. The system of claim 4 further comprising a data transmission system.

9. The system of claim 8 wherein said data transmission system comprises:

a tunneling source having an input and a plurality of output channels, said tunneling source for receiving one or more packets at the input and for distributing the packets a plurality of output channels coupled to an output of said tunneling source;

a cable modem termination system (CMTS) coupled to receive packets from each of the plurality of tunneling source output channels and to transmit signals on a plurality of parallel output channels.

10. The data transmitting system of claim 9, wherein the plurality of CMTS output channels are RF channels.

11. The data transmitting system of claim 10, wherein each RF channel carries packets that are compliant with the DOCSIS standard.

12. The data transmitting system of claim 9, wherein said CMTS further comprises:

a CMTS router, having an input coupled to signals from said tunnel source and having a plurality of output ports;

a plurality of channel modulators, each of said plurality of channel modulators coupled to receive signals from a corresponding one of the CMTS router output ports.

13. The data transmitting system of claim 12 further comprising:

a hybrid fiber coaxial (HFC) network coupled to the output of port of each of said plurality of channel modulators.

a plurality of demodulator circuits, each of the plurality of demodulator circuits having an input coupled to said HFC network and having an output;

a serializer having a plurality of input ports, each of the plurality of input ports coupled to a respective one of the output ports of said plurality of demodulator circuits and having a single output port.

14. The data transmitting system of claim 13 further comprising a TCP gateway having an input adapted to be coupled to a router and having an output coupled to an input of said tunnel source, said TCP gateway for terminating a TCP connection and for providing an acknowledgement signal a sending node.

15. A data transmission system having at least one input, the data transmission system comprising:

a tunneling source having an input and a plurality of output channels, said tunneling source for receiving one or more packets at the input and for distributing the packets a plurality of output channels coupled to an output of said tunneling source;

a cable modem termination system (CMTS) coupled to each of the plurality of tunneling source output channels, said CMTS for receiving signals on each of the plurality of tunneling source output channels and for transmitting signals on a plurality of parallel output channels.

16. The data transmitting system of claim 14, wherein the plurality of CMTS output channels are RF channels.

17. The data transmitting system of claim 15, wherein each RF channel carries packets that are compliant with the DOCSIS standard.

18. The data transmitting system of claim 14, wherein said CMTS further comprises:

a CMTS router, having an input coupled to signals from said tunnel source and having a plurality of output ports;

a plurality of channel modulators, each of said plurality of channel modulators having an input port coupled to receive signals from a corresponding one of the CMTS router output ports and having an output port coupled to provided one of the CMTS output channels.

19. The data transmitting system of claim 14, further comprising:

a plurality of channel modulators, each of said plurality of channel modulators coupled to receive signals from the output of said tunneling source;

a digital signal processor, coupled to receive signals from each of said plurality of channel modulators; and

a digital-to-analog converter having an input coupled to receive signals from said digital signal processor.

20. The data transmitting system of claim 17 wherein each of said plurality of channel demodulators comprises:

an analog-to-digital converter having an input coupled to receive signals from a corresponding one of the CMTS router output ports and having an output;

a plurality of bandpass filter circuits parallel coupled to the output of said analog-to-digital converter, each of said bandpass filter circuits having a passband characteristic which is offset in frequency from each of the other bandpass filter circuits;

a plurality of demodulator circuits, each of the plurality of demodulator circuits having an input coupled to the output of a respective one of said bandpass filter circuits and having an output;

a serializer having a plurality of input ports, each of the plurality of input ports coupled to a respective one of the output ports of said plurality of demodulator circuits and having a single output port.